

145 AF

## TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.  
ITL.0333US

In The Application Of: **Cynthia S. Bell**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/524,029	March 13, 2000	William Boddie	47795	2629	6169

Invention: **Automatic Brightness Control for Displays**

### COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

**June 16, 2008**

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Dated: **July 24, 2008**

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CC:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

Cynthia S. Bell

§

Art Unit: 2629

Serial No.: 09/524,029

§

Examiner: William Boddie

Filed: March 13, 2000

§

Atty Docket: ITL.0333US  
(P8221)

For: Automatic Brightness  
Control for Displays

§

Assignee: Intel Corporation

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**APPEAL BRIEF**

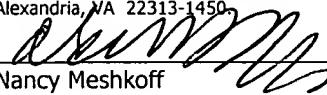
07/28/2008 HDESTA1 00000031 09524029

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Nancy Meshkoff

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## **REAL PARTY IN INTEREST**

The real party in interest is the assignee Intel Corporation.

## **RELATED APPEALS AND INTERFERENCES**

Appeal No. 2007-1300, decided June 18, 2007, in this case.

## **STATUS OF CLAIMS**

Claims 1-2 (Rejected).

Claims 3-4 (Canceled).

Claims 5-6 (Rejected).

Claims 7-23 (Canceled).

Claims 1-2 and 5-6 are rejected and are the subject of this Appeal Brief.

**STATUS OF AMENDMENTS**

No amendments were made in the Reply to Final Rejection submitted on May 2, 2008.  
All amendments have therefore been entered.

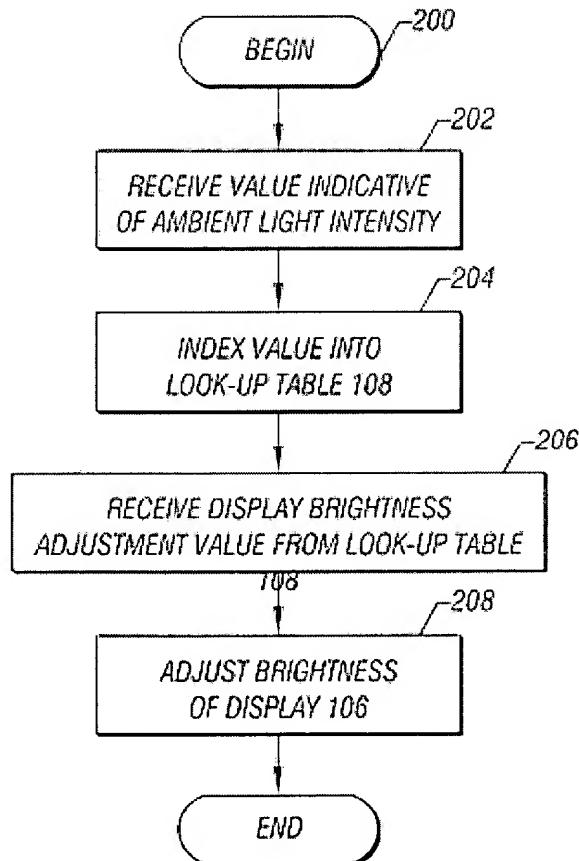
## **SUMMARY OF CLAIMED SUBJECT MATTER**

In the following discussion, the independent claims are read on one of many possible embodiments without limiting the claims:

1. A method comprising:

receiving an indicator of the ambient light on a display by accumulating energy into a plurality of sensors (Fig. 2, 114) of an imager (Fig. 3, 150), deriving an integration time based upon the accumulated energy (Spec., p. 7, lines 12-18) and determining the indicator based upon the integration time (Fig. 6, 202; Spec., p. 7, lines 19-24); and

automatically adjusting a brightness for the display based upon the indicator of ambient light on the display (Fig. 6, 208; Spec., p. 11, lines 18-19).



***FIGURE 6***

2. The method of claim 1, further comprising:  
using the indicator as an index into a look-up table (Spec., p. 7, lines 19-24).
  
5. The method of claim 2, further comprising:  
receiving a brightness value for the display from the look-up table (Spec., p. 7, lines 19-24).
  
6. The method of claim 1, wherein accumulating energy comprises producing an analog voltage signal (Fig. 4; Spec., p. 9, lines 15-20).

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claims 1-2 and 5-6 fail to comply with the written description requirement under 35 U.S.C. § 112, first paragraph.**
- B. Whether claims 1 and 6 are unpatentable under 35 U.S.C. § 103(a) over Murakami (JP 08-242398) in view of Nishibe (US 4,847,483).**
- C. Whether claims 2 and 5 are unpatentable under 35 U.S.C. § 103(a) over Murakami (JP 08-242398) in view of Nishibe (US 4,847,483) and further in view of Helms (US 5,760,760).**

## ARGUMENT

**A. Whether claims 1-2 and 5-6 fail to comply with the written description requirement under 35 U.S.C. § 112, first paragraph.**

With respect to the Section 112 objection set forth in paragraph 6, it is indicated that the Examiner was unable to locate any discussion within the specification reciting the specific limitation that the detected ambient light is the ambient light on a display. It is not believed that there is any such limitation in the claim. Instead, the claim calls for receiving an indicator of the ambient light on a display by accumulating energy into a plurality of sensors of an imager.

Therefore, the rejection should be reversed.

**B. Whether claims 1 and 6 are unpatentable under 35 U.S.C. § 103(a) over Murakami (JP 08-242398) in view of Nishibe (US 4,847,483).**

The office action concedes that the cited reference to Murakami does not teach deriving an integration time based on accumulated energy and determining an indicator of the ambient light on a display based on integration time. Final Rejection at page 4, lines 11-12.

The Board noted in its previous decision in this case that the mere fact that a reference that relates to controlling the brightness of a display teaches using "integration time to determine the intensity of the ambient light," still falls "one step short of converting that information in some way to a form useful for controlling display brightness." Board Decision at page 6.

The office action states that "it is conventional in the art to determine the level of ambient light by deriving an integration time of an image sensor based upon accumulated light energy and using the value of integration time as a determination of ambient light level as disclosed in Nishibe...." The latest office action seems to concede that the same deficiency exists with respect to Nishibe, but continues to press the point despite the Board's instructions to the contrary. In other words, Nishibe only teaches measuring light intensity, not controlling display brightness. Therefore, reconsideration is requested.

It is asserted that Nishibe's technique would be performed over a wide dynamic range. But a display would not be outside and, thus, there is no need for a sensor with such a wide range.

The suggestion that Nishibe's technique would be faster than Murakami's is pure speculation. Nishibe does not relate to measuring screen brightness and could be applied across the screen as in Murakami. The argument that there would be no need to compute an average light level on the entire image plane in Nishibe is equally true of Murakami. But Murakami's use of the whole plane would be better and more accurate. There is no need for speed in the claimed application and there is no showing of any speed difference.

**C. Whether claims 2 and 5 are unpatentable under 35 U.S.C. § 103(a) over Murakami (JP 08-242398) in view of Nishibe (US 4,847,483) and further in view of Helms (US 5,760,760).**

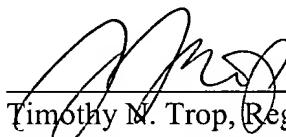
For the reasons set forth above, these claims should also be patentable.

\* \* \*

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: July 24, 2008

  
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## **CLAIMS APPENDIX**

The claims on appeal are:

1. A method comprising:  
receiving an indicator of the ambient light on a display by accumulating energy into a plurality of sensors of an imager, deriving an integration time based upon the accumulated energy and determining the indicator based upon the integration time; and  
automatically adjusting a brightness for the display based upon the indicator of ambient light on the display.
  
2. The method of claim 1, further comprising:  
using the indicator as an index into a look-up table.
  
5. The method of claim 2, further comprising:  
receiving a brightness value for the display from the look-up table.
  
6. The method of claim 1, wherein accumulating energy comprises producing an analog voltage signal.

## **EVIDENCE APPENDIX**

None.

**RELATED PROCEEDINGS APPENDIX**

*See* Decision on Appeal No. 2007-1300, June 18, 2007, on the following pages.

I7L.033345  
P 8221

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

*Ex parte* CYNTHIA S. BELL

**RECEIVED**  
JUN 22 2007  
Trop, Pruner, & Hu, P.C.

Appeal 2007-1300  
Application 09/524,029  
Technology Center 2600

Decided: June 18, 2007

Mail Date: 6-18-07  
Due Date: 8-18-07  
Act. Req.: Request for reconsideration; appeal to ct. of appeals  
 TphDkt  Access/Excel  CltDkt

Before JAMES D. THOMAS, KENNETH W. HAIRSTON,  
and ROBERT E. NAPPI, *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from a Final Rejection of claims 1 to 3, 5 to 17, and 21 to 23. We have jurisdiction under 35 U.S.C. § 6(b).

Appellant has invented a method and system for controlling the brightness of a display based upon received light information (Figures 1 and 6; Specification 11 and 17).

Claim 8 is representative of the claims on appeal, and it reads as follows:

8. A system, comprising:  
a receiver of light information to produce an indicator; and  
a driver coupled to the receiver, wherein the driver receives the indicator, and, based upon the indicator, automatically sends a signal to control a brightness of a display.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Hosoi	US 5,589,934	Dec. 31, 1996
Helms	US 5,760,760	Jun. 2, 1998
Bowen	US 6,046,730	Apr. 4, 2000
Toffolo	US 6,337,675 B1	(filed Jul. 30, 1996) Jan. 8, 2002
Chikazawa	EP 0 883 103 A1	(filed Oct. 30, 1997)

The Examiner rejected claims 8 to 12 and 17 under 35 U.S.C. § 102(b) based upon the teachings of Helms. The Examiner rejected claims 1 to 3, 5, 6, and 21 to 23 under 35 U.S.C. § 103(a) based upon the teachings of Helms and Hosoi, the Examiner rejected claim 7 under 35 U.S.C. § 103(a) based upon the teachings of Helms, Hosoi and Toffolo, the Examiner rejected claims 13 and 14 under 35 U.S.C. § 103(a) based upon the teachings of Helms and Chikazawa, and the Examiner rejected claims 15 and 16 under 35 U.S.C. § 103(a) based upon the teachings of Helms and Bowen.

Appellant contends that Helms does not describe a driver as set forth in claim 8 on appeal (Br. 10; Reply Br. 2), and that the combined teachings of the applied references lack the use of an integration time to adjust the brightness of a display as set forth in claim 1 on appeal (Br. 9; Reply Br. 1).

We hereby sustain the anticipation rejection of claims 8 to 12 and 17, sustain the obviousness rejections of claims 13 to 16, reverse the obviousness rejections of claims 1 to 3 and 5 to 7, and sustain the obviousness rejection of claims 21 to 23.

### ISSUES

Does Helms describe a driver as set forth in the claims on appeal?

Do the applied references teach or would they have suggested to the skilled artisan the use of integration time to adjust the brightness of a display?

### FINDINGS OF FACT

According to the Appellant, the light meter circuit 110 in the ambient light assessment block 102 receives ambient light, quantifies the light information, and digitizes the information in analog-to-digital converter 120. The analog input to the analog-to-digital converter is a logarithm proportional to the incoming light intensity. The display brightness driver 200 compares the quantized information with display brightness values from look-up table 108. Based on the comparison result, the display driver adjusts the brightness of the display 106 (Figure 1; Specification 5 and 11). In an alternative embodiment, Appellant discloses an ambient light assessment block 102b with a plurality of photo sensing sensors 152 in an imager 150. The ambient light assessment block 102b includes a control

unit 154 that calculates the integration time for all of the outputs from the plurality of photo sensing sensors 152 (Figure 3; Specification 6 and 7).

Helms describes a method and apparatus for automatically adjusting the brightness level of an LCD based on the sensed ambient light around the LCD (Abstract; col. 2, ll. 5-10). A photodetector 14 located on the LCD produces an output signal AL that is proportional to the ambient lighting conditions around the LCD (col. 3, ll. 39-42). The output signal AL is compared to a plurality of automatic brightness levels ABL in a look-up table in memory 204b (col. 3, ll. 51-65). “[O]nce the microprocessor 204a accesses from the memory 204b the ABL signal value corresponding to the AL signal input thereto, it outputs to the Backlight driver circuitry 213 an appropriate BC signal for adjusting the brightness level of the LCD 12” (col. 3, l. 65 to col. 4, l. 3).

According to the Examiner’s findings (Final Rejection 6 and 7), Helms describes all of the system structure found in claims 8 to 12 and 17.

In Hosoi, the results of ambient light measurement by photoelectric element 40 and integration by integration circuits 44 and 46 are merely displayed by display 14 (col. 4, l. 51 to col. 6, l. 61). The results are not used to control brightness of the display 14. The only control of brightness<sup>1</sup> of the display 14 is via photoelectric converter element 16, comparator 56 and the CPU 52 (col. 2, ll. 60-65; col. 4, ll. 18-25).

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<sup>1</sup> The display brightness control in Hosoi operates in a similar manner to the display brightness control described in Helms.

Toffolo presents a graph that shows a linear relationship between display luminance and ambient luminance (Figure 2). Toffolo states that a logarithmic relationship could be used in place of the linear relationship (col. 2, ll. 26-28).

Chikazawa was cited by the Examiner for a teaching of a direct view LCD used as a microdisplay (Final Rejection 8).

Bowen was cited by the Examiner for a teaching of an apparatus that encompasses a LCD that can be used as a mobile information device (Final Rejection 9).

#### PRINCIPLES OF LAW

Anticipation is established when a single prior art reference discloses expressly or under the principles of inherency each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1946 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

Obviousness is determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

#### ANALYSIS

Turning first to the anticipation rejection of claim 8, we agree with the Examiner's findings that Helms describes a system that includes a receiver of light (e.g., light sensor 14) that produces an indicator of ambient light, and a driver (i.e., microprocessor 204a and a driver 213) coupled to the receiver to receive the indicator of ambient light. Based upon the indicator of

ambient light, the driver automatically sends a signal to control the brightness of the display. Appellant's arguments concerning calibration and lower cost devices are not germane to the anticipation issue (Brief 10), and Appellant's argument that Helms does not teach a driver is clearly in error (Reply Br. 2).

Turning next to the obviousness rejection of claim 21, we find that all of the limitations of this claim read directly on the description of Helms set forth *supra* or the description of Hosoi set forth *supra*. The imager in Helms is the photodetector or light sensor 14, and the imager in Hosoi is the photoelectric element 16 in Hosoi (Br. 11; Reply Br. 2).

With respect to the obviousness rejection of claim 22, a driver is clearly described in Helms (Br., 11; Reply Br. 2).

Turning lastly to the obviousness rejection of claim 1, we agree with the Appellant's arguments that Helms relates to controlling the brightness of a display but "does not use an integration time," and that Hosoi teaches how to use "integration time to determine the intensity of ambient light" (Br. 9). We additionally agree with the Appellant's argument that "this is still one step short of converting that information in some way to a form useful for controlling display brightness" (Br. 9).

#### CONCLUSION

Anticipation has been established by the Examiner for claim 8. The anticipation rejection of claims 9 to 12 and 17 has not been responded to by Appellant. The obviousness of claims 21 and 22 has been established by the Examiner. The obviousness rejections of claims 13 to 16 and 23 have not

been responded to by Appellant. The obviousness of claims 1 to 3 and 5 to 7 has not been established by the Examiner.

#### DECISION

The anticipation rejection of claims 8 to 12 and 17 is affirmed, and the obviousness rejections of claims 1 to 3, 5 to 7, 13 to 16, and 21 to 23 are affirmed as to claims 13 to 16 and 21 to 23, and are reversed as to claims 1 to 3 and 5 to 7.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

**AFFIRMED-IN-PART**

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